DEPARTMENT of ENVIRONMENTAL SERVICES Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: BLACK MOUNTAIN POND Town: SANDWICH	Lake Area (ha): Maximum depth (m):	2.43 9.8
County: Carroll	Mean depth (m):	3.2
River Basin: Merrimack	Volume (m³):	79000
Latitude: 43°52'59" N	Relative depth:	5.6
Longitude: 71°30'38" W	Shore configuration:	1.27
Elevation (ft): 2265	Areal water load (m/yr):	24.86
Shore length (m): 700	Flushing rate (yr ⁻¹):	7.70
Watershed area (ha): 88.1	P retention coeff.:	0.45
% watershed ponded: 0.0	Lake type: natural	w/dam

BIOLOGICAL:	15 March 1995	27 July 1994
DOM. PHYTOPLANKTON (% TOTAL) #1	DINOBRYON 50%	DINOBRYON 95%
#2	(ALL ALGAE SPARSE)	
#3		
PHYTOPLANKTON ABUNDANCE (units/mL)		
CHLOROPHYLL-A (µg/L)		0.55
DOM. ZOOPLANKTON (% TOTAL) #1	CALANOID COPEPOD 86%	CALANOID COPEPOD 64%
#2	KERATELLA 14%	NAUPLIUS LARVA 28%
#3		KERATELLA 9%
ROTIFERS/LITER	10	8
MICROCRUSTACEA/LITER	64	86
ZOOPLANKTON ABUNDANCE (#/L)	74	94
VASCULAR PLANT ABUNDANCE		Common
SECCHI DISK TRANSPARENCY (m)		9.8
BOTTOM DISSOLVED OXYGEN (mg/L)	3.5	6.0
BACTERIA (E. coli, #/100 ml) #1		
#2		
#3		

SUMMER THERMAL STRATIFICATION:

not stratified

Depth of thermocline (m): None Hypolimnion volume (m³): None Anoxic volume (m³): None

CHEMICAL:			BLACK MOU SANDWICH	JNTAIN PON	1D
	15 March 1995		27 July 1994		
DEPTH (m)	3.5	6.5	2.0	5.0	8.0
pH (units)	5.5	5.6	5.7	5.8	6.0
A.N.C. (Alkalinity)	1.2	1.8	0.3	0.5	1.0
NITRATE NITROGEN	< 0.10	< 0.10	< 0.05		< 0.05
TOTAL KJELDAHL NITROGEN	< 0.10	0.22	0.12	0.16	0.19
TOTAL PHOSPHORUS	0.006	0.004	0.003	0.006	0.009
CONDUCTIVITY (µmhos/cm)	20.6	21.8	17.6	17.7	18.2
APPARENT COLOR (cpu)	11	14	< 5	8	7
MAGNESIUM			0.28		
CALCIUM			1.3		
SODIUM			0.6		
POTASSIUM			0.23		
CHLORIDE	< 2	< 2	< 2		< 2
SULFATE	5	5	5		5
TN : TP		55	40		21
CALCITE SATURATION INDEX			6.0		

All results in mg/L unless indicated otherwise

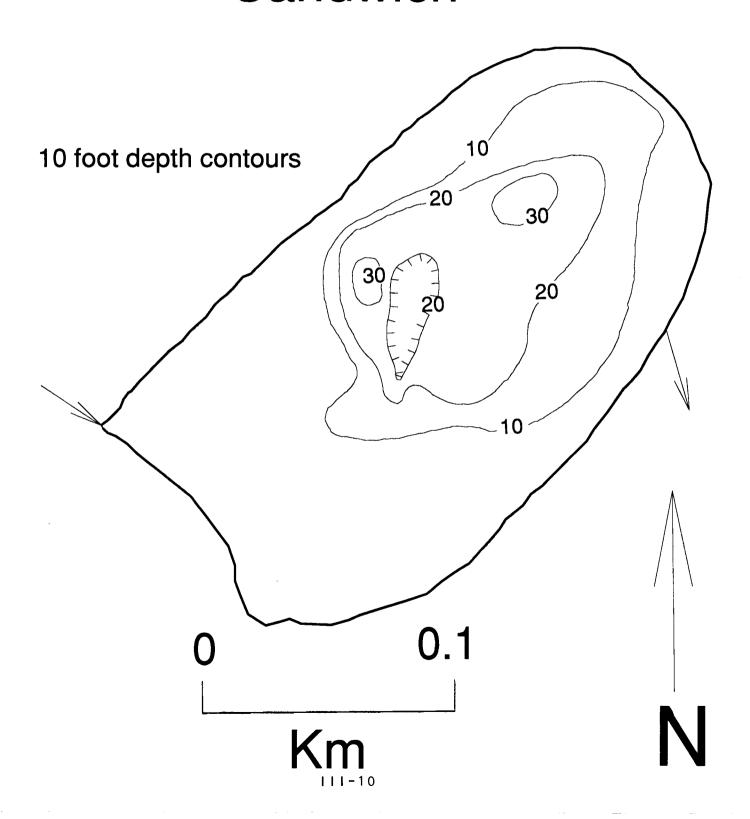
TROPHIC CLASSIFICATION: 1994

D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
**	0	3	0	3	Oligo.

COMMENTS:

- 1. This is a remote mountain trout pond, located within the White Mountain National Forest, that was sampled jointly with the NH Fish and Game Department. It has been sampled annually since 1982 by helicopter for acid rain parameters as part of the Department's Acid Rain Remote Ponds program.
- 2. This is a clear water, somewhat acidic, oligotrophic pond.
- 3. In both winter and summer, calanoid copepods were the dominant zooplankton and were healthy looking, full of reddish-orange fat globules.

Black Mountain Pond Sandwich



FIELD DATA SHEET

LAKE: BLACK MOUNTAIN POND

DATE: 07/27/94

TOWN: SANDWICH

WEATHER: SUNNY & WINDY

	DEPTH (M)	TEMP (°C)	*DISSOLVED OXYGEN	OXYGEN SATURATION
	0.1	22.5	8.1	92 %
	1.0	22.5	8.1	92 %
	2.0	22.5	8.1	92 %
	3.0	22.5	8.2	93 %
	4.0	22.2	8.2	93 %
	5.0	22.0	8.3	94 %
	6.0	22.0	8.5	96 %
	7.0	21.5	8.1	91 %
	8.0	21.0	6.8	75 %
	9.0	20.5	6.0	66 %
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SECCHI DISK (m):

9.8

COMMENTS:

BOTTOM DEPTH (m):

9.8

TIME: 1230

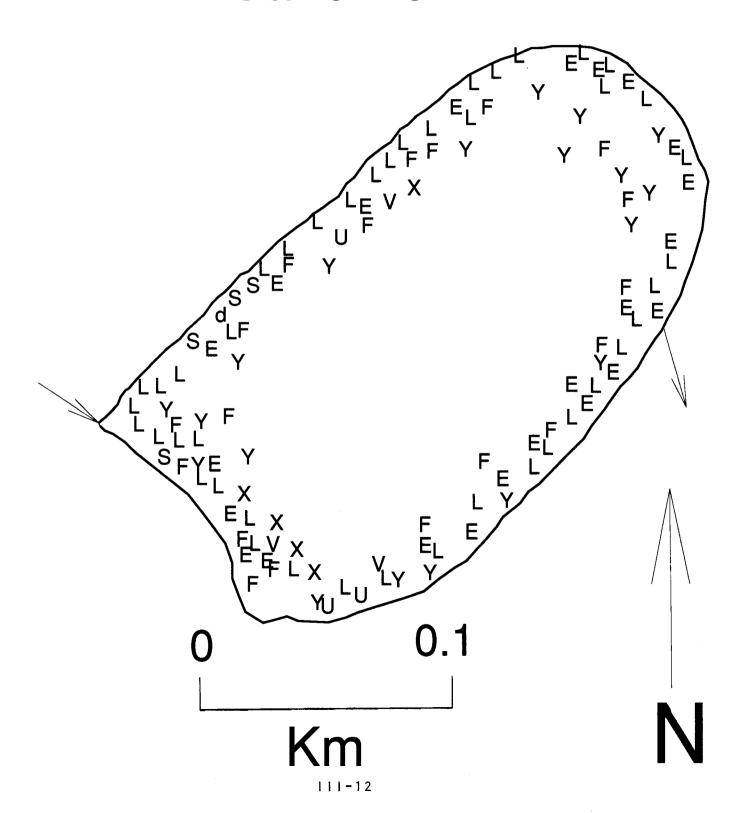
This pond was not thermally stratified despite a depth of 30+ feet. Clear water allows sun light penetration to the bottom (note: Secchi disk depth was at the

bottom).

*Dissolved oxygen values are in mg/L

Black Mountain Pond

Sandwich



AQUATIC PLANT SURVEY

LAK	E: BLACK MOUNTAIN POND	TOWN: SANDWICH	DATE: 07/27/94
., .	PLANT NAME		ABUNDANCE
Key	GENERIC	COMMON	ABONDANCE
L	Lobelia dortmanna	Water lobelia	Common
E	Eriocaulon septangulare	Pipewort	Scattered
F	Nymphoides cordatum	Floating heart	Scattered
Y	Nuphar	Yellow water lily	Scattered
v	Vallisneria americana	Tape grass	Sparse
บ	Utricularia	Bladderwort	Sparse
х		Sterile thread-like leaf	Common
S	Sparganium	Bur reed	Sparse
d	Dulichium arundinaceum	Three-way sedge	Sparse
	1	OVERALL ABUNDANCE:	Common

GENERAL OBSERVATIONS:

1. Freshwater sponges were observed but are not depicted on the map.